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EMO

Radiation Hazards
Protection of Civil Defence
Soviet Citizens in C.D.
Revised EBS
U.S. Shelter Program
Surviving Disasters

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PEACETIME RADIATION HAZARDS

by
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With the increasing and widespread use of nuclear energy throughout the world, it is of major importance that the problem of peacetime radiation hazards be understood and that the necessary precautions be taken to eliminate or at least reduce to the minimum the hazards to health that such proliferation may cause. There is no doubt that peacetime hazards from the use of nuclear energy are of a different order of magnitude than those from nuclear war and in fact are insignificant by comparison. With the built-in safety factors, the tremendous amount of attention paid to safety and the completely different concepts involved in producing peacetime nuclear energy, any hazards that do exist are not extraordinary and should be considered more as normal industrial hazards than otherwise. Thus, one cannot conceive of the possible occurrence of a fission produced explosion in a nuclear reactor or nuclear power plant. The problem is essentially one of an increase in the normal background radiation to which we are exposed at all times. Such increase could occur as a result of accidents to nuclear reactors and nuclear power plants or by loss or accident to radioactive materials during transportation.

In a report of the Advisory Committee on the Biological Effects of Ionizing Radiation, Division of Medical Sciences, National Academy of Sciences, National Research Council, Washington, D.C., as quoted in the March 1973 Volume of Health Physics, consideration was given to suggested standards for major categories of radiation exposure. Taken into consideration were risk estimates and cost benefit analyses comparing activities involving radiation with alternative options. While such analyses are crude, they do provide the public with a basic understanding of some of the issues relating to the increased use of nuclear energy necessitated by the rapid dissipation of fossil fuel resources. Requiring clarification are the environmental and biological risks, the relation of such risks to the benefits to be gained and the net benefit to society of increased nuclear energy use as compared to alternative options.

It is estimated that natural background radiation on the average exposes mankind to a whole body radiation dose of 100 m/rem per year. One m/rem is 1/1000th of a rem. A rem is approximately the amount of radiation that an individual would receive if exposed for one hour at a distance of one yard from one gram of radium, or more precisely the dose of any ionizing radiation that will produce the same biological effect as that produced by 1 r of high voltage x radiation. With the increasing medical applications of nuclear radiation we also receive on the average an additional 100 m/rem of radiation to the various tissues of the body. A U.S. estimate is that with proper precautions and despite the increase in the nuclear power industry, the contribution to radiation exposure can be kept to less than 1 m/rem per year (about 1% of natural background). To ensure this minimum, very stringent control procedures are necessary. Not only is it essential to have rigid engineering specifications and optimum equipment performance but radioactive wastes also must be carefully confined and controlled to prevent their escape to the environment. It is also evident that well organized and efficient security plans must be prepared and enforced to prevent sabotage and the possible diversion of fissionable materials. Every precaution must be taken against the eventuality of serious accidents which implies the need for rigid and foolproof containment design in nuclear power plants to prevent environmental contamination.

The present Radiation Protection Guide (RPG) was based on genetic considerations. It recommends that the average individual exposure to radiation be less than 10 roentgens before the average or mean age of reproduction, i.e., 30 years. It is estimated that if exposure to man-made radiation can be kept to a level below that of background radiation, then any additional effects will be less in quantity and no different in kind from those that man has experienced and been able to tolerate throughout history. Thus, without considering man-made radiation there are an appreciable number of mutations, chromosonal aberrations and genetic deaths in every million conceptions. It is estimated that 15% of pregnancies lasting long enough to be recognized end in early abortion. Many additional conceptions terminate so early that abortion is not recognized. Aborted foetuses are usually grossly malformed and have other abnormalities resulting in genetic death and elimination of the inferior mutant strain. Considering the genetic effect it is estimated that the dose required to produce a number of mutations equal to those that occur naturally is in the range between 20 and 200 rem. This may be termed the doubling dose for chronic radiation effects in man.

If the population is exposed to 170 m/rem/yr (or 5 rem/30 yr reproduction cycle), it is estimated by the Advisory Committee that genetic effects could cause additional defects of one kind or another in the first generation in the U.S. (assuming 3.6 million births annually) to a total of between 100 and 1800 cases or approximately 0.05%. After several generations using the same dose rate such defects could occur to about 5 times that percentage. The incidence of effects from all

radiation produced changes could result in about .75% defects considering the same population increase. Defects result from radiation produced ionization or excitation of the cells composing living tissue. Some of the cell constituents essential to normal functioning are altered or destroyed. In some cases cells are unable to undergo mitosis (cell division) so that normal cell replacement in the organism is inhibited. A further calculation made by the Committee was that ill health resulting from genetic damage on the basis of 5 rem per generation would eventually lead to an increase of 5% in the ill health of the population.

Over and above the problems resulting from genetic effects are those caused by the production of tumours and cancers. Risk estimates were based on data from Japan, from patients irradiated therapeutically and from groups occupationally exposed. It was calculated that exposure of the U.S. population to 5 rem/30 years (on the average) could cause from roughly 3000 to 15000 cancer deaths annually depending on the assumptions used in the calculations. The most likely estimate is approximately 6000 cancer deaths annually, an increase of about 2% over other cancer caused deaths. This is an increase of about 0.3% in the overall death rate from all causes. Not considered in the report however, was the rapid progress by medical science in the treatment of cancer and the determination of its causes. Cancer may well be under control within the not too distant future thus reducing substantially the calculated deaths from it.

It is obvious, even if the calculations greatly exaggerate the possible overall effects from peacetime radiation, that the present radiation protection guide must be looked at very closely. The guide must be related to risk. Acceptability of the risk must depend on how avoidable it is and to the extent not avoidable, how it compares with the risk of cutting back on peacetime radiation techniques and developments. In other words, how does the risk compare with the risk of alternative options and those normally accepted by society. Over the next few decades, with proper precautions, increased dose levels from all man-made sources of radiation should not exceed by more than a few mr. the present average annual dose to the population. If as seems likely such limited increases are achievable, the current guide is obviously too high and should be adjusted to a more acceptable level.

The Advisory Committee recommended some general principles which if closely followed would go a long way towards lessening radiation exposures. A major consideration is that there should be no exposure to man-made nuclear radiation unless such exposure can be anticipated to result in a commensurate benefit. Although protection from radiation is of prime concern, such protection should not result in the substitution of a worse hazard because the radiation was avoided. Following along on that theme there should not be an attempt to reduce small risks even further at the cost of large sums of money which if spent otherwise would clearly produce greater benefit to those concerned. There should be an upper limit of man-made non-medical exposure to individuals so that risks of injury are very small in relation to risks that are normally accepted. Exceptions to this limit in specific cases should be acceptable only if it is evident that brief higher exposures would be beneficial in preventing greater risks from other causes. An example here may be additional exposures allowed to rescue teams in removing injured personnel from highly contamined areas resulting from a nuclear accident. Man-made non-medical exposure limits for the general population must be considerably below the upper limit permitted for individuals. An important principle suggested by the Committee was that relating to medical radiation. Exposure in this case can and should be reduced considerably by limiting medical radiation use to clinically indicated procedures using efficient exposure techniques. Operation of radiation producing equipment must be very carefully controlled and the equipment itself must meet optimum engineering standards.

The question of the ecology and steps that can be taken to limit ecological pollution by radioactive materials is an additional important consideration. It is necessary to conduct studies on the problem and to put into force effective programs to deal with it. It is essential to determine the amount and type of radioactivity being released, how and where radioactive materials move through the environment, where they concentrate in natural systems and how long it might take for them to reach a point of contact with man. This information is necessary to prevent potential problems from developing and to provide early warning of future hazards that may occur.

In Canada Dr. Dewar of AECB estimates that about 95% of accident planning is directed towards prevention of accidents and only 5% towards coping with accidents that might occur. In general the licensee of nuclear power facilities is responsible for accident prevention arrangements and for initial response to an event. When an accident occurs, a prompt report is made to the appropriate inspection officer, usually an officer of the federal or provincial health department.

Transportation of radioactive materials in Canada is a very common occurrence — over 1000 shipments per month. Most shipments are small and even if an accident occurred would not pose a serious health hazard. Large and potentially extremely hazardous shipments, e.g., irradiated reactor fuel represent less than 1% of shipments in Canada. Regulations concerning packaging and shipping are very strict and are backed up by emergency procedures. For example, where hazards are potentially high, there is exclusive use of special transport vehicles, controlled shipment routing and accompaniment by radiation surveyor and/or police escort. The AECB serves as technical advisor to regulatory authorities. Emergency procedures now cover the transportation of radioactive materials by all modes of transportation on a nation-wide basis.

When there is an accident, police with good communications are likely to be the first at the scene. They inform the nearest radiation experts from a list which has been provided to them. When the expert arrives at the scene he identifies the nature of the hazard, if any, takes the necessary corrective action, arranges for any additional assistance if required and remains at the location until all radiactive hazards have been removed.

Formal procedures for licensing nuclear reactors in Canada have been established. Applicants must have a thorough understanding of the consequences of operator error and any conceivable operating failures of safety equipment. They must have an effective emergency measures plan to minimize injury to workers and the public and assist and advise local authorities to draw up appropriate measures to assist in such emergencies. As stated previously, a fission produced explosion in a nuclear reactor is impossible and any explosion producing mechanical or thermal effects would be confined within the building. Radioactive fission products may however escape to the outside. The products would normally be in gaseous form and would mix with air to form a radioactive cloud proceeding downwind. This may result in a direct hazard to personnel in the vicinity or an indirect hazard through the contamination of food and water. The most dangerous materials in such an accident are radioiodines which concentrate in the thyroid and can cause thyroid malignancy. However cancer of the thyroid takes a long time to develop and is slowly progressive. It can be corrected by surgery. Radioactive particles may be inhaled, ingested, deposited on the body or be taken up by cows with a resultant concentration in milk. The degree of hazard that occurs will depend on the power of the reactor, its location, the nature of the accident and the meteorological conditions.

Each licensee must have detailed plans concerning evacuation, treatment of casualties and notification of local authorities. In most cases the local Medical Officer of Health (MOH) who is given wide authority in this respect would coordinate public action. General procedures would be:

Prompt notification of the MOH of accidents involving escape of radioactive materials from the reactor building and the likely extent of contamination;

Advice to personnel downwind of actions to take — either stay put or evacuate;

Issue of potassium iodide pills to those that have been exposed to the cloud. These are only effective if given within 10-12 hours after exposure;

Hospitalization if required according to a pre-arranged plan;

Survey of the area by field parties to determine the extent of fallout. On the basis of the survey the MOH would consider possible temporary evacuation of specific areas;

Testing of samples of food, water and milk for possible hazard.

Specific plans will depend very much on local conditions. The requirement is to have plans drawn up in advance to use all available assistance in the area. It is essential that the necessary actions be taken during the early critical period, the first 10-12 hours following an accident. Concerning the use of potassium iodide, an American estimate is that if the drug is given within six hours the concentration of radio-iodine in the thyroid is cut by 50%. If given after 12 hours there would be very little effect.

Mr. Bryce L. Rich, Head of the Health Physics Section, Hazards Control Department, Laurence Livermore Laboratory, University of California, emphasizes the importance of keeping radiation hazards in perspective. One shouldn't overreact to low levels. Over a 30-year period less than 0.4% accidents resulted from radiation as compared to all industrial accidents. He considers that genetic hazards from radiation could be related to everyday situations as follows:

Consumption	Radiation
1 oz. alcohol per day	50 rem per year
6 cups of tea per day	5 rem per year

Also considering hazards to other bodily functions, life shortening may be compared as follows:

100 rem	— 1 - 3 years
30 - 150 lbs. overweight	— 3 - 4 years
Smoking 1 pack per day	— 10 years

In summary, hazards from peacetime radiation are infinitesimal as compared to those that would be experienced from radioactive fallout in a nuclear war. They can however cause a significant increase to the background radiation normally experienced and in the absence of rigid controls and safety measures add to the long list of hostile agents that man must continually battle in his daily environment. ▲

THE PROTECTION OF CIVIL DEFENCE IN INTERNATIONAL HUMANITARIAN LAW

by
*Erik Schultz**

I. Introduction

In the last 20 to 25 years civil defence organizations have been created in many countries of the world. On the basis of experience acquired during the Second World War, the aim of these organizations has often been to protect the civilian population in times of war. In other cases the intention has been to provide the population with the most effective defence possible against natural catastrophes. Still another objective has been to establish a single organization that would concentrate and develop the potential of the society to deal with all kinds of catastrophes, whether man-made or due to natural causes.

The refinements made in modern warfare, the technologically more complex structure of society and the concentration of people in urban areas have noticeably increased the possibility of the population being exposed to great losses and suffering during armed conflicts. While the greatest loss of life was sustained by military forces until the First World War, the situation was reversed during, and particularly after, the Second World War when the losses in the civilian population in wartime were much greater than in the armed forces, both numerically and proportionally.

The International Red Cross, which has been working for over 100 years to prevent the loss of human lives and to reduce human suffering in wartime, took up the challenge. *The XIVth International Conference of the Red Cross,* held in Brussels in 1930, faced the problem squarely. By a resolution[1], it was declared that the protection of civilians was not guaranteed by any diplomatic convention.

As a consequence, the International Committee of the Red Cross (ICRC) was invited to study the question and the National Red Cross Societies were urged to initiate debates in their respective countries on the question of the protection of the civilian population in wartime and to appeal to their governments to take the necessary steps in this regard. The fairly extensive work of the ICRC in this area was suspended during the Second World War. Inspired by the violations that had taken place in several countries during the war and which underlined the need to develop humanitarian rules in international law so as to ensure minimum protection of the civilian population in wartime, the ICRC resumed its work in this field immediately after the war. The efforts of the ICRC proved successful when the Diplomatic Conference held in Geneva in August 1949 adopted the Fourth Geneva Convention relative to the Protection of Civilian Persons in Time of War.

In 159 articles and two annexes, the Fourth Geneva Convention states rules for the protection of the civilian population, beginning with that in occupied territory. This convention did not introduce any new principles in humanitarian law, but it did explain in detail how the conventional principles of the respect due to persons and human dignity are to be understood, and it guarantees the civilian population a protected status in a certain number of fields with regard to the Occupying Power.

II. Fourth Geneva Convention — Article 63

One of the concerns during the Second World War was the large number of infringements by the Occupying Power on the activities of the National Red Cross Societies. These societies had to submit to interference in their structure and activities and in some cases the Occupying Power went so far as to dissolve the National Red Cross Society. Regulations concerning this state of affairs had not been taken into consideration in the provisions of international humanitarian law. The ICRC therefore drafted such regulations and agreement was reached at the Diplomatic Conference of 1949 on the following new provision (Fourth Geneva Convention, Article 63, Paragraph 1):

> "Subject to temporary and exceptional measures imposed for urgent reasons of security by the Occupying Power:
>
> (*a*) recognized National Red Cross (Red Crescent, Red Lion and Sun) Societies shall be able to pursue their activities in accordance with Red Cross prin-

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[1] Resolution No V, XIV th International Conference of the Red Cross, Brussels, 1930.

ciples, as defined by the International Red Cross Conferences. Other relief societies shall be permitted to continue their humanitarian activities under similar conditions;

(*b*) the Occupying Power may not require any changes in the personnel or structure of these societies, which would prejudice the aforesaid activities."

In the course of debate during the Diplomatic Conference it was proposed by the Belgian delegation that the organizations established immediately before and during the Second World War under names such as "Air Raid Precautions", "Civil Defence", "Civil Air Defence", etc., should enjoy similar protection. The aim of these government-supervised organizations was to provide protection to the civilian population in time of war; this meant, in fact, the application of the principles of the Brussels Resolution of 1930. Their work was based on the same humanitarian principles as that of the Red Cross and represented a substantial development of government activity, both at state and municipal level, in areas that had until then been the concern of humanitarian societies, particularly the National Red Cross Societies, but also certain other humanitarian societies. In several countries these organizations, which had been set up in response to terror bombing, had been dissolved after the war, whereas in other countries the task of reorganizing them on a new basis was already well in hand.[2]

As result, the Conference agreed to add to Article 63 a new paragraph which is quoted hereunder:

"The same principles shall apply to the activities and personnel of special organizations of a non-military character, which already exist or which may be established, for the purpose of ensuring the living conditions of the civilian population by the maintenance of the essential public utility services, by the distribution of relief and by the organization of rescues."

Even though the terms were not expressly used, it was clear from the debates that the delegates had in mind what is today called "Civil Defence" or "Protection Civile"[3].

This protective organization must be "of a non-military character". Therefore, if Civil Defence units take an active part in hostilities, for example in armed defence against commandos or paratroopers, the rules of the Third, and not the Fourth, Geneva Convention will apply to them, and the Occupying Power will have the right to dissolve such an organization and to arrest its personnel[4].

III. Evaluation of Paragraph 2 of Article 63

The adoption of Paragraph 2 of Article 63 had one important result: Civil Defence was introduced into international law and given basic protection. Nevertheless, in spite of everything, the rule had several weaknesses.

It is applicable only to an Occupying Power and not to military operations in general, during which Civil Defence is therefore without protection.

Article 63 merely protects the organization as a protective organization and does not prevent requisitioning Civil Defence personnel to compel them to work for the Occupying Power, as provided for under Article 51 of the Fourth Geneva Convention.

The Article is applicable subject "to temporary and exceptional measures imposed for urgent reasons of security by the Occupying Power". Although such a rule of emergency law may seem realistic and must be narrowly interpreted[5] legally, it implies, by its vague wording, a risk that it could be used by the Occupying Power in such a way as to weaken the content of Article 63 and could even be considered as practically an invitation to do so.

Because of its wording Article 63 also contains several vague areas that could give rise to hesitations and different interpretations by the parties concerned. Some, for example, have maintained that a textual interpretation of Paragraph 2 of Article 63 would prevent its application to preventive civil defence measures such as warning, evacuation and shelter services. Others are of the opinion that the provisions apply to all duties characteristic of Civil Defence. Such a vague wording in basic areas is obviously unacceptable in the long run.

IV. Developments Since 1949

In the ensuing years, the ICRC received from numerous National Red Cross Societies requests urging it to continue its efforts to develop proposals for rules that would complete those in effect concerning Civil Defence: this was the beginning of an extensive task which is still not finished approximately 25 years after the birth of the Geneva Convention.

The ICRC took the question under study by incorporating it into broader studies started in the early 1950s dealing with a reorganization of international humanitarian law.

[2] This was the case, for example, in the Scandinavian countries. Denmark passed a new law on civil defence on 1 April 1949.

[3] See the officiel ICRC Comment on the Fourth Geneva Convention by *Jean Pictet*, Geneva, 1958, Article 63.

[4] Ibidem.

[5] Ibidem.

The first attempt by the ICRC came close. In the "Draft Rules for the Limitation of the Dangers incurred by the Civilian Population in Time of War" presented at the *XIXth International Conference of the Red Cross in New Delhi in 1957*, the ICRC introduced a rule (Art. 12) imposing on the parties to the conflict the obligation of facilitating the work of civilian organizations exclusively engaged in protecting and assisting the civilian population in case of attack. The parties to the conflict should also be able to agree to confer specific immunity on the personnel, equipment and facilities of such organizations by means of a special emblem.

However, since several other provisions of the Draft Rules touched on areas concerning the vital security interests of the Great Powers — limitation of the use of nuclear weapons, etc., prohibition of certain methods of attack, etc. —, the project ran into strong opposition and was rejected in its entirety; this, of course, included the proposed article on civil defence, although it had been approved in principle by several governments during the debate.

Nevertheless, the ICRC continued its work. Along with renewed preparations for the reorganization of international humanitarian law in a series of important fields the problems of Civil Defence were submitted for study to a series of conferences of experts under the direction of the ICRC[6] and were followed up by supporting resolutions at the Centennial Congress of the Red Cross held in Geneva in 1963 as well as at the XXth and XXIst International Conferences of the Red Cross in Vienna in 1965 and in Istanbul in 1969[7].

A special initiative was taken by the Nordic countries (Denmark, Finland, Norway and Sweden) in the mid-1960s. After a round of discussions at the Swedish National School of Civil Defence, near Stockholm, these countries submitted to the ICRC a memorandum containing concrete definitions of Civil Defence tasks, its distinction from the armed forces, its protection, etc.

V. Difficulties of a Fundamental Nature

However, this was no small matter.

The organization and structures of Civil Defence vary from country to country. In most countries Civil Defence is an entirely civilian organization: in some countries it is wholly or partly integrated into the military forces; in others it comes under the War Office, although a civilian organization. In a few countries Civil Defence is an autonomous body that complements existing peacetime organizations (fire departments, technical services, etc.). In others it is merely a general name for a number of existing peacetime organizations capable of extending their activities in wartime. In a small number of countries its structure is so incoherent that one can barely refer to it as an organization. Finally, in a few countries, a part of the personnel is uniformed, while in others this is not the case.

The geographic and topographic differences between countries justify the considerable variations in organization, and the same can be said for the diversity of administrative structures, the distribution of urban and rural areas, the population density, etc.

The aims of the various national Civil Defence organizations differ as well. Some countries attach great importance to the position of Civil Defence in the overall defence system, with which it constitutes total defence; others emphasize the fact that Civil Defence must have nothing but purely humanitarian tasks and that it should not participate either directly or indirectly in the general defensive effort of the country; still others have adopted a balanced intermediate system between these two extremes.

We are thus dealing with an organization that has a looser structure, from the traditional point of view, than that of the military defences and which is organized less uniformly than the latter. This creates complications when Civil Defence must be given a specific status in international law by protocols that can be applied to all countries.

These difficulties delayed and hindered concrete proposals for the texts of a convention. It was necessary to overcome many doubts and hesitations among national experts and officials, Red Cross representatives, and experts in international humanitarian law. Nevertheless, it seems that in recent years there has been a greater understanding of the desire to afford Civil Defence protection sanctioned by international law, in addition to the other attempts that have been made to develop international humanitarian law. At the same time, it appears that there has been a clarification of ideas about most of the areas containing difficult details.

The following paragraphs outline the points of view that have crystallized after the many conferences of experts and group discussions held in recent years at the invitation of the ICRC.

a. Definition of Civil Defence

There is general agreement that the Civil Defence

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[6] "Working Party on the Position of Civil Defence Organizations in International Law", Geneva, 12-16 June 1961 (Report of the ICRC, Geneva, 1963).
"Report of Proceedings" (Report of the ICRC on the Conference of Experts in Geneva, 27 October — 6 November 1964).
"Status of Personnel of Civil Defence Organizations" (Report of the ICRC to the XXth International Conference of the Red Cross in Vienna, May 1965).
"Status of Civil Defence Service Personnel" (Report of the ICRC to the XXIst International Conference of the Red Cross in Istanbul, May 1969).
"Protection of the Civilian Population against Dangers of Hostilities", pages 139-161 (Report of the ICRC to the First Conference of Government Experts in Geneva, May-June 1971).

[7] Resolution No VII, Centennial Congress of the Red Cross, Geneva 1963. Resolution No XXIX, XXth International Conference of the Red Cross, Vienna, 1965. Resolution No XV, XXIst International Conference of the Red Cross, Istanbul, 1969.

activities that should be protected by international law must be of a *humanitarian* nature, i.e. those involving saving human lives, prevention and relief of suffering, and measures for the survival of the population in time of war. To be more precise, these involve: rescue, emergency assistance, medical transportation, fire-fighting, technical repairs, warning of the civilian population, evacuation, establishment of shelters, etc.

The status of Civil Defence in relation to *Military Defence* has given rise to special considerations. Obviously, Civil Defence units cannot have a combat mission or participate in hostilities. Civil Defence must be civilian. In most countries, a civilian ministry is responsible for it, but the fact that Civil Defence may come under a military ministry does not in itself give it a "military" character. The distribution of responsibilities to national ministries is not always made according to logical criteria.

Nor must the fact that Civil Defence forces are organized "along military lines", i.e. in formations commanded by civilian officers, or that they wear uniforms, or that they are recruited on as compulsory basis, be sufficient in itself to make Civil Defence a military organization.

It should be acknowledged that the fact that Civil Defence receives assistance from military units during major catastrophes does not compromise its status as a humanitarian relief organization.

Furthermore, the fact that Civil Defence cooperates with military defence in the performance of its humanitarian mission should not, in principle, modify its protected status. This is true in most countries for organizations as civilian and humanitarian as the hospitals. Some doubtful cases have been discussed. For example, Civil Defence fire-fighting units engaged in putting out a fire at a military aerodrome, and thus preventing the destruction of expensive military equipment, would in fact be contributing to the maintenance of military potential. This argument has tempted many to demand that Civil Defence abstain from such involvement if it is to retain its protected status. However, this argument is not tenable. In most cases, such fires would endanger human lives if the flames spread. Requiring Civil Defence forces to remain "neutral" in such situations would mean that Civil Defence should be "whiter than white". More would be required of Civil Defence personnel than of the civilian population in general. The workers who help produce aircraft parts in a factory contribute to a country's general defence effort as much as the Civil Defence personnel who fight a hangar fire, to try to prevent the aircraft from being destroyed. And the same workers as part of the civilian population, benefit from the protection of international humanitarian law.

The fact that Civil Defence personnel participate in the general defence effort should have no bearing on its protected status along with other civilians.

Normally Civil Defence forces are entirely civilian. In a few countries, however, its officers are regular *military officers;* in other countries a certain number of reserve officers are attached to the Civil Defence forces. The other ranks may also belong to the armed forces. Such a situation, in itself, will probably not cause the Civil Defence organization to lose its protection; the problem is what the status of such personnel will be if they fall into enemy hands. Whereas civilians must be freed immediately, there are doubts about what should be done in the case of persons who are technically members of the armed forces and must report to them, but who, until otherwise instructed, perform duties in the Civil Defence organization alongside the civilian officers. This problem has been discussed, but a final solution probably remains to be found. In accordance with the provisions now in effect, i.e. Article 4 A of the Third Geneva Convention relative to the Treatment of Prisoners of War, such persons should probably be considered prisoners of war, and this may be the fairest solution, in principle. In the case where a government wants protection for its Civil Defence forces, it should, in principle, organize them into fully civilian formations. If, on the other hand, it decides that persons belonging to the armed forces should protect the Civil Defence emergency services, it should face the fact that these forces will not be able to continue their work if they fall into enemy hands.

However, this solution would be disagreeable to some countries in which the Civil Defence organization, as a whole, comes under the armed forces. The "strict" solution, nevertheless, seems to be supported by the provisions of Articles 24-29 of the First Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field. Whereas medical personnel (Article 24) and the staff of Voluntary Aid Societies, such as the National Red Cross Societies (Article 26), are, in accordance with Article 28, not treated as prisoners of war if they fall into the power of the adversary, rescue personnel belonging to the armed forces (Article 25) are considered as prisoners of war (Article 29).

Apart from these considerations, the Civil Defence organizations of most countries contain a certain number of retired officers as well as older reserve officers who are not necessarily required to report to the armed forces. Under Article 4B of the Third Geneva Convention, persons having belonged to the armed forces of the occupied country may, under certain conditions, be treated as prisoners of war. It would be advisable to amend this article, for example by a formal provision allowing such persons to remain members of Civil Defence organizations under all circumstances, provided their military obligations have ceased.

The question whether Civil Defence units can be *armed* has been the subject of detailed discussions. The absolute legality of arming humanitarian formations is an accomplished fact. Under Article 22 of the First Geneva Convention, it is not considered as depriving a medical unit or establishment of protection if the personnel are armed and if they use the arms in their own

defence, or in that of the wounded and sick in their charge. Civil Defence organizations will often be required to act during armed disturbances or engagements. Therefore, it would be reasonable to grant Civil Defence units, or at least a limited portion of them, a similar right to bear small arms and to use these arms in self defence or for the maintenance of public order, without modifying their civilian status. This matter should be clarified by a specific provision to the conventions.

b. NATURE AND EXTENT OF PROTECTION

The advisability of trying to grant Civil Defence special protection has been widely questioned. As part of the civilian population Civil Defence personnel are already protected under the present conventions. There is therefore no need to pursue the matter.

In addition, the fear has been expressed that granting particularly specific protection to a large number of persons in Civil Defence would weaken the protection enjoyed by the civilian population.

It has also been feared that granting special protection to Civil Defence would cause several other special groups in the civilian population to seek similar treatment, making the rules too complicated. If too many protective emblems were approved, the respect earned over the generations by the distinctive emblem of the Red Cross (Red Crescent, Red Lion and Sun) would be weakened.

On further consideration, however, it becomes evident that there is a need to grant Civil Defence protection of a *different and wider nature* than that given to the civilian population.

Civilians cannot be subjected to military attacks. This rule, of course, also applies to Civil Defence personnel. In the case of Civil Defence however, there are special reasons for emphasizing this. Civil Defence rescue work in modern war must be considered such that it offers the same risks as medical duty with the armed forces in the combat zones; therefore, both services should be granted identical protected status.

In addition, there must be rules to protect humanitarian *work* and allow it to be carried out; in other words it is necessary to have a rule that prohibits the Parties to the conflict from preventing Civil Defence forces from performing their humanitarian work — fighting fires, rescuing trapped persons, etc.

Just as it should be forbidden to attack Civil Defence personnel, the Parties to the conflict should also be forbidden, by a formal rule, to attack or destroy Civil Defence buildings, equipment and means of transport.

These rules should be applicable in the areas of military operations. As for the activities of Civil Defence in occupied territory, the protection provided for in Paragraph 2 of Article 63 of the Fourth Geneva Convention should be developed in a similar fashion. Civil Defence should be allowed to perform its humanitarian work without impediment. The Occupying Power should not be able to interfere with Civil Defence activities in any way that would prevent the unlimited use of Civil Defence rescue forces. For example, it should be forbidden for the Occupying Power to enlist Civil Defence members and compel them to work (Article 51 of the Fourth Geneva Convention) and to requisition the buildings, materiel, equipment and means of transport of Civil Defence, which must have them at its entire disposal at all times.

It is a question of determining the extent to which *the military necessity of urgent security measures* should be mentioned, as exceptions, in the texts of the conventions.

Several articles in the Geneva Conventions contain such reservations. A clause from Article 63 of the Fourth Geneva Convention was mentioned above. However, it is doubtful whether the incorporation of clauses of this nature was well thought out. Their application would probably decrease protection, since any express reservation contained in the provisions of a convention can be used to justify practically any violation. It will always be the violating party, in fact, that decides whether to impose temporary and exceptional measures for urgent reasons of military security, i.e. for urgent military necessities, in "its own" favour.

Any clause that can be used in this manner to favour the illegitimate interests of one party carries the risk of abuse. If on the other hand, it is a matter of protecting the legitimate interests of one of the parties, the clause will probably be useless. The clause dealing with the need for urgent security measures in Article 63 of the Fourth Geneva Convention in an example. This clause was mainly intended to cover the case of relief societies which, under the protective provisions of Article 63, would be tempted to abuse their protected status in order to perform hostile acts against the Occupying Power[8]. Evidently, in the case of such an abuse the Occupying Power would be justified, even without such a provision in taking the necessary steps to defend itself and the dissolution of the relief society, the control of its administration and other similar measures could be considered.

c. IDENTIFICATION

If it is desired to increase the protection afforded Civil Defence under international law, it will be necessary to formulate clear rules outlining the measures to be taken for the identification of the persons, buildings, equipment and means of transport to be protected.

The principles of this type of identification are well known and firmly established. As regards the medical units of armed forces, Articles 38-42 of the First Geneva Convention and Articles 41-45 of the Second Convention outline the rules on special distinctive emblems (Red Cross, Red Crescent, Red Lion and Sun on a white background) used by personnel and on equipment, buildings, etc., as well as the rules on identify cards for personnel. Articles 18-22 of the Fourth Geneva Convention contain similar provisions applicable to civilian hospitals an their staff as well as to certain vehicles carrying wounded or sick civilians.

[8] Official ICRC comment on the IXth Geneva Convention, by *Jean Pictet*, Geneva, 1958, Article 63.

It would be advisable to formulate provisions for the identification of Civil Defence along the same lines.

The requirement for an *identity card* raises no special problem. As for the *distinctive emblem,* however, a series of considerations have arisen.

So as not to weaken the protection offered by the firmly established Red Cross (Red Crescent, Red Lion and Sun) emblem, its use must not be extended to excessively large groups of persons. On the other hand, the ICRC *has been working* for a long time to complete the provisions concerning the protection of medical units belonging to both the armed forces and the civilian hospitals, as well as of their personnel. From the humanitarian point of view, all other medical personnel should also be protected and identified by means of the Red Cross (Red Crescent, Red Lion and Sun) emblem. If such provisions are adopted, it would be illogical not to authorize Civil Defence medical services as well, to use the emblem of the Red Cross (Red Crescent, Red Lion and Sun). Otherwise, they would be the only services looking after the wounded and sick not authorized to do use the emblem.

Therefore, in the latest ICRC Draft Rules *it is stated that Civil Defence medical services* shall be identified according to the current general rules for the identification of medical services. Consequently, the distinctive emblem will be the Red Cross (Red Crescent, Red Lion and Sun).

However, the *other services* of Civil Defence should have a distinctive emblem that cannot be confused with that of the Red Cross (Red Crescent, Red Lion and Sun), just as it should be clearly distinguishable from other international emblems such as that for the protection of cultural property (The Hague Convention of 1954), that for the protection of hospital and safety zones (Annex I to the Fourth Geneva Convention, Article 6), the United Nations emblem and others. Following consultations between the ICRC and national experts in Geneva in January 1973, two alternative proposals for an international emblem to protect Civil Defence were made:

Proposal 1: A light-blue equilateral triangle on a light-orange background.

Proposal 2: Two light-blue vertical stripes on a light-orange background.

The proposal that is finally adopted will depend on the deliberations of the diplomatic conference that deals with the definitive text of the Protocol.

It is agreed that everything must be done to ensure that the emblem is as visible as possible to the other Party. It should be as large as permitted by its practical applications and should be visible from all directions. For example, the marking of persons solely by the use of armbands would not be satisfactory. A jacket covering the chest and the back and having a large emblem front and back would allow easier identification. It would have to be made of light-reflecting material.

The marking of buildings, means of transport, etc., should be done in a similar fashion by the use of emblems that are as large as the circumstances permit. It should be possible to illuminate them by night.

VI. Drafts Presented Recently

The rules that have already received widespread support at the expert level can now (March 1973) be summarized as follows:

1. Civil Defence tasks must be of a purely humanitarian nature: to save human lives, to prevent and relieve suffering, to ensure the survival of civilians in time of war and in catastrophes. The following may be cited as a few examples: rescue, first aid, fire-fighting, social, assistance to civilians, maintaining public order, warning services, evacuation, shelters.
2. Civil Defence cannot have a combat mission, although it can be organized along military lines, be under the control of military authorities recruit personnel for compulsory service and cooperate with the armed forces in the performance of its duties.
3. Civil Defence will be authorized to carry small arms to maintain public order in disaster zones as well as for its own defence.
4. Protection should be granted not only to Civil Defence organizations, but also to persons who, while not directly connected with such organizations, perform civil defence tasks, provided they are working within the framework established by the Government.
5. In combat zones it will be forbidden for the belligerents to prevent Civil Defence from performing its humanitarian mission or to attack Civil Defence personnel. It will also be forbidden for them to attack the buildings, equipment and means of transport of Civil Defence.
6. In occupied territory, the Occupying Power must provide the necessary assistance for the performance of Civil Defence tasks. The Occupying Power will not be allowed to impose measures that could prevent Civil Defence or its personnel from performing its tasks effectively. The Occupying Power will not be able to compel Civil Defence personnel to do work other than that relating to civil defence or to perform duties outside the occupied zone. The Occupying Power will not be able to requisition the buildings, equipment or means of transport of Civil Defence.
7. Protection will be extended to Civil Defence forces sent by a neutral or allied foreign country to provide assistance in the country in which hostilities are taking place, if the parties to the conflict agree, to the arrangement.
8. Protection applies in the first place to international conflicts. For conflicts that are not of an international nature, summary rules of protection, based

on the same principles, have been formulated. They are part of a large group of Draft Rules concerning conflicts that are not of an international nature.

9. The personnel, equipment, buildings and means of transport of Civil Defence will have to be identified by a special emblem, depending on which of the two proposals described above (the light-blue triangle on a light-orange background or the two light-blue vertical stripes on a light-orange background) is adopted. In addition, permanent Civil Defence personnel will be issued with identity cards to prove that they are members of Civil Defence.
10. As regards the medical services of Civil Defence, the emblem should, however, be the distinctive emblem of the Red Cross (Red Crescent, Red Lion and Sun).

VII. The Next Steps

So far the decisive steps in the development of Civil Defence protection have been two *conferences of government experts* which were held in Geneva in May and June 1971 and May and June, 1972 and to which, on invitation by the ICRC, a great number of countries sent technical experts and representatives of the national agencies concerned. As already mentioned, Civil Defence problems constitute only a limited part of a series of extensive projects for the reaffirmation and development of international humanitarian law as applied to armed conflicts. The ICRC presented to the second conference of government experts, held in 1972, two Draft Protocols containing a number of extensive proposals, the first on international armed conflicts and the second on conflicts not of an international nature.

After detailed discussions by government experts at the two conferences and after a series of special discussions in the winter of 1973, the ICRC is now preparing new proposals for convention texts; countries can expect to receive these proposals later. A preliminary debate on the whole question has been planned on the basis of these proposals and will take place at the *XXIInd International Conference of the Red Cross in Teheran* in November 1973. Following this conference, it is expected that the draft conventions will be submitted for final study to a *diplomatic conference,* which Switzerland is prepared to host in Geneva in the spring of 1974.

In addition to the rules for the protection of Civil Defence the Draft Protocols of the ICRC contain a lengthy series of provisions relative to the attenuation of the conditions of war, including, among other things, additional rules for the protection of the wounded, sick and shipwrecked, a number of rules regarding combatants formulated as an extension of the provisions of the former Hague Convention of 1907, as well as rules on the conditions of the conduct of guerilla warfare. There are also several proposals dealing with extending the protection of the civilian population and with regulations outlining which weapons can be used and how they can be used.

Several of these provisions are quite controversial. The proposals on the restrictions of the use of weapons have run into considerable opposition from several countries, which are of the opinion that discussion of these problems is beyond the jurisdiction of a Red Cross conference; these problems are, in fact, quite sensitive from the point of view of political security. Some want them referred to another forum for study (the Conference of the Committee on Disarmament (CCD)) or dealt with during the Strategic Arms Limitation Talks (SALT) of the super-powers so that the final solution is part of a broader, more coherent plan which would ensure that the new provisions do not modify the security balance between the blocs. On the other hand, a group of small states wants the ICRC proposals extended in the direction of the very wide-ranging Draft Rules presented by the ICRC, and rejected, at the XIXth International Conference of the Red Cross in New Delhi in 1957.

The proposals made by the ICRC at the two conferences of 1971 and 1972 were essentially more realistic than the Draft Rules of 1957.

Nevertheless, it was still not possible to get them over the fundamental hurdles of political security which were raised for some of the proposals. It is hardly realistic to imagine that new rules of international humanitarian law, on the regulation of the conduct of war under a humanitarian aspect, could be adopted without the Great Powers, at least, being co-signatories. In any event, such rules would have no noticeable importance in future wars.

It is therefore to be hoped that the resistance to some of the proposals — considered by some countries to be too wide ranging and by other countries to be not extensive enough — will not bring about the rejection of the *whole* group of rules, as happened in New Delhi sixteen years ago. It seems possible even now to notice agreement in principle between most of the countries in a number of areas. This is certainly the case for such questions as: the protection of the wounded, sick and shipwrecked, a series of proposals to extend the protection of the civilian population, proposals for the strengthening of controls governing the observance of international humanitarian law in times of war, and proposals to extend the protection of Civil Defence — the subject of this article.

In areas where vital political interests relating to security are concerned, experience shows that progress in the humanization of the acts of war takes place very slowly. The goal must be approached slowly step by step. Yet several steps in the right direction have been taken in the last decade: the treaty banning nuclear tests in the

(Continued on page 12) **THE PROTECTION**

SOVIET CITIZENS IN CIVIL DEFENSE

by
L. Antipov
Voyennyye Znaniya, Moscow, January 1973

A discussion of the first subject in the 20-hour universal obligatory minimum training program, "Selfless and conscientious fulfillment of civil defence obligations is the duty of the citizens of the USSR and a most important condition for protection of the population from nuclear weapons. All that has been created by the people must be protected reliably. Fortifying the Soviet state also means fortifying its armed forces and improving our Motherland's defense in every possible way. And as long as we live in a restless world this task is one of the most important!" The words of CPSU Central Committee General Secretary L. I. Brezhnev, which rang out from the podium of the party's 24th congress, were directed toward all Soviet people, toward each one of us.

In the last few years a certain easing of the tension in the international situation has been achieved, primarily by the efforts of the Soviet Union and other socialist countries. However the forces of aggression and militarism may have been pressed back, as was noted at the congress, but they have not been rendered harmless. Imperialist circles in the West, particularly in the USA, have no intention of giving up their desires for conquest. This is graphically evidenced by the barbarian acts of American militarists in Vietnam.

Under such conditions all-possible fortification of the socialist state's defenses is the duty of every Soviet citizen. Outfitted with first-class combat equipment, our heroic armed forces are capable of destroying any aggressor. In modern warfare a significant role in the work of protecting the population and national economy from nuclear weapons is delegated to civil defense forces.

As a system of the most important national measures, civil defense is the business of every citizen in the country. It has the job of providing reliable protection for the people, ensuring stability of the national economy's operation during wartime, and being ready to mobilize its forces at any moment to fight natural disasters — floods, hurricanes, landslides, and fires. It is not accidental that military subunits (podrazdeleniye) and civil defense formations have participated most actively in erasing the consequences of earthquakes in the last few years. They endured severe trials and a true test last summer when peat and forest fires broke out in a number of places.

There are thousands upon thousands of laborers, office workers, and kolkhoz farmers in the formations. When highly skilled and well organized this is a tremendous force capable of executing the most complex missions. This is why so much significance is imparted today to their practical training, seasoning, and skillfulness.

A formation is a shock detachment that must be ready for action all the time. It is not the only civil defense force, however. In fulfilling its duties such as dispersal and evacuation, taking cover in shelters, conducting rescue and immediate emergency and restoration operations, and others, when necessary all residents of the country will participate without exception, independent of age or profession. The minimum amount of knowledge and skills included in the 20-hour universal citizens' training program is obligatory and needed to an equal degree by the plant director and laborer, the academician and the housewife, the student and the pensioner.

Universal obligatory citizens' training for protection against modern weapons has always had an important place in the system of civil defense measures. Nor are we deviating from this rule today. On the contrary the new program is oriented toward improving the quality of universal training, especially with respect to training by exercises and acquiring, strengthening, and improving sound practical habits.

In reviewing the new program someone might say: "It's the same old stuff again — protective equipment, evacuation, rules of behavior . . ." And in fact there are only two subjects in the new program that had been absent previously. We have already named the first. The second is "The duties of adults and the particulars of organizing protection for children from nuclear weapons." The subject matter has hardly changed since the principles of protection are the same. But what has happened is that the approach to training has been made somewhat different.

The new program poses an important task to civil defense organs — organizing and providing training for the whole population in the practical actions that would be necessary if an enemy employs modern weapons. This means that each individual must know how to use a gas mask, close and open airtight doors and shutters on emergency shelter manholes, remove casualties from under rubble and transport them out of the disaster area, and render first aid. In accordance with the program's practical approach lessons on the subjects "Evacuation and dispersal," "Actions of the people in response to a threat of enemy attack and to civil defense sirens," and several others are being conducted with a consideration

for the specific conditions at the installation and its plan for protection against nuclear weapons.

Of course it is possible to conduct the practical lessons in an uninteresting way, formally, ticking off items on a checklist. People could be gathered together, one or two could be put to work, and while they don gas masks or prepare cotton gauze dressings the rest could sit around without participating, as if they were not there at all. There is little benefit from such "practical," if I can use that word, lessons.

The new program does not encourage such a thing. Moreover it makes it possible to disclose all deficiencies in training since it requires that every laborer, kolkhoz farmer, and office worker must obligatorily pass a practical examination upon completion of the lessons and exercises. Grades are given depending on the time taken to fulfill the standards and the correctness of the actions. If errors are made, time is provided for preparing for a repeat examination. The standards are in line with the requirements of the group operations system.

In essence the new program is one of self-protection on the part of every citizen against nuclear weapons. It also provides practice for actions during natural disasters. Independent of prior training, each year every individual is obligated to demonstrate his ability to act in response to civil defense sirens and follow all the necessary practical procedures. It is only through such periodic, regular repetition of the procedures and obligatory testing — fulfillment of standards — that sound, persistent habits can be acquired.

The adult population not involved in production studies the methods for protection against nuclear weapons independently with the new booklet *Eto Dolzhen Znat' Kazhdyy* (Each Person Must Know This). Social organs and civil defense functionaries help in organizing discussions, practical lessons, film presentations, and so on for this category of people.

If we will not be able to prevent it the modern war of nuclear missiles will primarily be a test of an individual's moral strength. It will demand tremendous courage, high awareness and steadfastness, and strict discipline from each individual. The effectiveness by which civil defense completes its mission depends to a significant degree on indoctrination of Soviet people such that they possess high moral, political, and psychological qualities. This is why special attention must be afforded to this aspect in all civil defense lessons.

This task is intimately associated with the problem of preventing and eliminating possible negative reactions on the part of the population. Take for example the problem of evacuating the population from major cities into an area outside the city. It is quite obvious that panic could be avoided if people are acquainted beforehand with the evacuation procedures and the living conditions in the resettlement areas, and if they are taught to observe specific rules of behavior and convinced that cover and shelter are available in the out-of-town location.

The new universal obligatory minimum training program affords great possibilities for instilling confidence in the reliability of protection. When people acquire practical skills and see that they can fulfill the standards, they will feel significantly more self-confident.

Publicity plays an important role in the execution of the civil defense mission, particularly with respect to citizen training. Its job is to instill steadfastness, watchfulness, organization, and other qualities in Soviet people. Civil defense publicity is inseparable from patriotic military indoctrination, one of the tasks of which is to instill love toward the Soviet Armed Forces, which are standing alertly in defense of our Motherland. Civil defense organs work together in this important business with the Komsomol, the Voluntary Society for Assistance to the Army, Air Force, and Navy, with trade unions, and with the Znaniye Society.

The defensive might of the socialist state depends on high combat readiness of the armed forces. It is intimately connected with the country's economic level and the readiness of the population and the national economic installations to protect themselves from modern weapons. The entire population, all state and social organizations have an interest in fortifying and improving civil defense, inasmuch as the successful execution of its mission plays a tremendous role in increasing the defensive capability of the country. This is why every Soviet citizen must become infused with a feeling of personal responsibility for the fulfillment of civil defense measures and participate in them actively. ▲

THE PROTECTION *(Continued from page 10)*

atmosphere, in outer space and under water (1963), the agreement not to put nuclear weapons into orbit around the earth or to station them in space (1967), the treaty on the non-proliferation of nuclear weapons (1968), the treaty banning military weapons from the ocean floor (1971) and the agreement banning biological weapons (1972).

If it is not possible to reach agreement on the adoption of the ICRC Draft Rules as a whole before or during the Diplomatic Conference in 1974, it is hoped that, as a *first step*, it will be possible to agree on the adoption of the non-controversial parts of the drafts, including, as an addition to the protection traditionally granted to the Red Cross, extended protection of humanitarian civil defence. The *subsequent steps* concerning the development of international humanitarian law should then take place as the political situation permits. The task of subjecting the conduct of hostilities to increasingly legitimate guarantees is, in fact, a permanent process. Each partial solution has some value and should be welcomed. ▲

REVISED EMERGENCY BROADCAST SYSTEM

by
Major Frederick W. Eisele, U.S. Army

On November 2, 1972, the revised Emergency Broadcast System became operational. This culminated the results of an intensive study and associated operational and procedural development by the broadcast industry and federal government agencies.

As to what the purposes and functions of the Emergency Broadcast System are, this was best described by Mr. Clay T. Whitehead, Director of the Office of Telecommunications Policy. "The national level Emergency Broadcast System provides the President of the United States a readily available, reliable and low cost means of emergency communications with the American people. It affords a capability in grave emergencies when national communications resources have been damaged and the survival of the nation is threatened. This capability backs up the normal means of arranging a nation-wide broadcast through the commercial networks. Presidential EBS broadcasts may be to reassure and give direction to the populace regarding survival and recovery of the nation . . ."

The previously mentioned study was initiated after an employee of the National Warning Center inadvertently transmitted an "actual", in lieu of a test, Emergency Action Notification over the Emergency Broadcasting System. The confusion which followed within the broadcast industry dictated that substantial changes be made to preclude a recurrence, to reduce the probability of human or procedural errors, and to also restore confidence in the Emergency Broadcast System.

Changes

Among the changes implemented to date, the following are the most significant:

- The White House Communications Agency assumed operational control of designated origination points concerning the release of Emergency Action Notifications.
- Designated Continental Air Defense Command at Cheyenne Mountain Complex, Colorado Springs, and the United States Army Interagency Communications Agency as origination points.
- Established a "500 Net" teletypewriter network with two Automatic Send/Receive terminals and twenty-five Receive Only terminals.
- Established a private line telephone network "300 Net" between Continental Air Defense Command, United States Army Interagency Communications Agency, Associated Press and United Press International. This provides the capability to contact each user individually or conference the entire group.
- All provisions for the Attack Warning message were deleted from the basic Emergency Broadcast System plan.
- Deleted the nation-wide "seize key" cutting circuit from the AP/UPI Radio Wire Teletype.
- Provided for a variety of tests to be conducted to insure the Emergency Broadcast System remains operational and responsive. These tests to be conducted from Continental Air Defense Command and United States Army Interagency Communications Agency as well as separate test by Associated Press and United Press International.

In addition to the above, several other minor changes were incorporated by the participating agencies. The majority of these were deemed necessary based on the intensive training and acceptance testing conducted under the direction of Continental Air Defense Command and United States Army Interagency Communications Agency. These changes included such items as color coding the various actual and test tapes and modifications to the detailed checklists used by the participants in an Emergency Broadcast System activation, termination or National Industry Advisory Committee order change.

Activation of the EBS

It appears appropriate at this time to go through the sequence of events which results in the activation of the Emergency Broadcast System. The Emergency Broadcast System action begins when the White House Communications Agency Trip Officer calling from the President's location contacts one of the origination points, Continental Air Defense Command or United States Army Interagency Communications Agency. In this situation, it will be assumed that he has contacted Continental Air Defense Command. If United States Army Interagency Communications Agency had been selected, the procedure would be the same with the exception of a few minor internal differences. The Command Director acting for the Commander-in-Chief Continental Air Defense Command being the recipient of the White House Trip Officer's call, answers, and after exchanging authenticators the White House Trip Officer will provide the Command Director with the current Washington, D.C. time, type of Emergency Broadcast System action required (actual or test) and the National Industry Advisory Committee Order Number provides AT&T with the information it needs to configure the Emergency Broadcast System network. The Command Director directs the Continental Air Defense Command Systems Controller and the 47th Communications Group Technical Operations and Maintenance Duty Officer to

release the Emergency Broadcast System message. It is emphasized at this point that there is a two man control and verification throughout the release of the Emergency Action Notification. The Systems Controller and Technical Operations and Maintenance Duty Officer each have a key which opens separate locks on the cabinet housing the actual and test tapes. After selecting the can containing the appropriate tape, the Systems Controller and Technical Operations and Maintenance Duty Officer reverify that the proper tape has been selected. The tape is inserted in the "500 Net" Automatic Send/Receiver and begins to be sent. Prior to sending the broadcast codes, which activates the 25 Receive Only terminals, the tape stops for reverification by the Systems Controller and Technical Operations and Maintenance Duty Officer. After rechecking that the proper tape is inserted, the message is restarted. At this time, the Systems Controller, using the "300 Net" private line telephone network calls United Press International, Associated Press and United States Army Interagency Communications Agency and verifies the authentication of the message being transmitted.

At 25 locations throughout the broadcast and telephone industry, the Emergency Action Notification is being received. These Receive Only terminals check to insure the proper authentication has been used and that the Washington, D.C. date and time and National Industry Advisory Committee Order are included. If they are, the operator of the Receive Only terminals acknowledge by flipping a switch which results in a printout at the Automatic Send/Receive, when that station is polled by Continental Air Defense Command. In the event a station does not acknowledge, it is individually contacted by Continental Air Defense Command and the message may be passed over the phone or retransmitted if required. Prior to the telephone check, the White House Trip Officer is notified that the Emergency Action Notification has been transmitted and the identity of those stations which have not acknowledged.

Radio Wire Subscribers

Personnel at United Press International and Associated Press receive the Emergency Action Notification and retransmit it, including the controlled authenticator word to all the Radio Wire Subscribers. This group includes approximately 50% of the broadcast stations. AT&T accepts the National Industry Advisory Committee Order and configures a national Emergency Broadcast System network. In the event Continental Air Defense Command cannot, for technical reasons, transmit the Emergency Action Notification and National Industry Advisory Committee Order, Continental Air Defense Command directs United States Army Interagency Communications Agency to accomplish same. If neither station's Automatic Send/Receive is operational, the Emergency Action Notification and National Industry Advisory Committee Order are passed telephonically.

If the President changes location, a National Industry Advisory Committee Order change can be directed. This action is similar to that of the activation order and AT&T will reconfigure the Emergency Broadcast System network so that the President can speak from his new location.

As previously stated, there are several tests which are conducted to insure the responsiveness and operational status of the Emergency Broadcast System. These range from the weekly 300/500 Net test to check the equipment, to the Closed Circuit Test which simulates an actual activation and termination, and includes simulated Presidential broadcasts fed through the Emergency Broadcast System radio networks. These programs are not transmitted over the air, but are terminated at the broadcast stations.

It is believed the revised Emergency Broadcast System is a marked improvement over its predecessor. Action is already underway, under the direction of Office of Telecommunications Policy and the Federal Communications Commission to further improve and automate the process by which the Emergency Action Notification may be disseminated. ▲

REDIRECTION OF THE NATIONAL SHELTER PROGRAM

Defense Civil Preparedness Agency Circular

The DCPA program has been broadened to include preparedness against *all* likely peacetime or attack hazards. The national shelter program — including both the shelter survey and community shelter planning — is therefore being redirected.

Shelter surveys are being expanded to consider "all effects." That is, they are being expanded to identify protection against the most likely peacetime or attack hazards that each community could face. Community shelter planning in metropolitan areas will stress use of best-available protection against the direct effects of nuclear weapons (e.g., blast, fire), as well as fallout. CSP's* for non-metropolitan areas will continue to stress protection against fallout.

National Shelter Survey

The major initial effort under the expanded survey will be in metropolitan areas with a central city (or cities) of 50,000 or greater population. Emphasis will be on resurveying buildings already in the inventory, plus all schools and hospitals not previously included, for resistance to direct weapons effects — and to natural disaster hazards prevalent in the area, such as tornadoes, hurricanes, earthquakes, floods, and storm surges in coastal areas. New buildings will also be surveyed for resistance to direct weapons effects and natural disaster hazards.

With respect to fallout protection, existing data on protection will be used for buildings previously surveyed. Fallout protection will be evaluated for new buildings — in addition to their resistance to direct effects (e.g., fire, blast).

Protection against all nuclear weapons effects will be calculated on-site, rather than by computer. Results will thus be available to local directors with minimum delay. Computerized data will be available later, and will be used where a CSP is developed with computer assistance.

It will be assumed that power would be off during an attack period, and capacities of below-ground areas for fallout shelter will therefore be based on evaluation of natural ventilation.

Buildings will be surveyed to locate the *best available shelter* for nuclear effects and the natural disaster hazards that are most likely to occur in the community. The term "best available shelter" should not be misinterpreted. It is *not* necessarily "safe shelter;" that is, shelter guaranteed to save persons or keep them safe in a disaster. Rather, it is the safest area in each building that has been rated.

In the urbanized areas surveyed beginning in June 1973, school and hospital buildings that do not qualify as adequate fallout shelters *will* be surveyed for resistance to direct weapons effects and natural disasters. This will allow local Directors and school districts to develop plans based on use of the best available protection for school children; similarly, local Directors and hospital authorities can develop improved emergency plans for hospitals.

Some survey effort may be required to update CSP's in lower risk areas. These surveys will be for locating the best available protection from fallout radiation and prevalent natural disasters. Schools and hospitals will also be included in such surveys.

Regions will coordinate with State and local civil preparedness directors on scheduling the expanded survey, and survey teams will make advance contacts with State and local directors. Success will then be dependent in large measure on the cooperation of State and local directors, and the extent of their preparatory work *prior* to the arrival of the survey teams. This includes arranging for office space for the survey team, and arranging for access to the buildings to be surveyed. Such preparatory work is essential if the summer-hire surveyors (engineering undergraduates, who are trained to collect structural data) are to be able to complete their work on schedule. If the surveyors have to make such arrangements, including the necessary explanations, this could prevent completing the survey in a locality during the summer months.

Since much of the survey work will be done during the summer, when many schools are closed, the school superintendent, school principals, or custodians should be contacted and appointments made for access to school buildings. Guides for the teams, and floor plan sketches, should if possible be provided. Building owners or managers should be contacted by phone, letter, or personal visit to explain the new survey and obtain their permission for a survey team to gain access to the building.

Community Shelter Planning

CSP's for metropolitan areas with a central city (or cities) of 50,000 or greater population will stress protection against direct weapons effects (e.g., fire, blast) as well as fallout. This is because metropolitan areas — due to industrial or other economic concentrations — may be more likely to experience direct effects, in the event of attack upon the United States, than is the case for most non-metropolitan areas. CSP's for metropolitan areas will therefore be developed after an expanded survey has identified best-available protection against blast and fire effects.

Metropolitan-area CSP's will in most cases be developed with computer assistance for shelter allocation. Assistance for CSP will be provided on-site by a DCPA regional representative or by State CSP officers, as

*CSP Community Shelter Plan.

they become familiar with computer-assisted CSP techniques. Community shelter plans in larger cities will no longer be developed on an individual-contract basis; the old contract CSP approach will be replaced by assistance provided on-site as just outlined.

Demands on the time of local directors and other local officials will be decreased, where computer-assisted techniques are used for shelter allocation. Following local approval of the shelter allocation, operational plans for the contingency of enemy attack should be developed or updated by local planning teams led by the local director, as outlined in the "Standards for Local Civil Preparedness". Natural disaster operational plans should also be based on use of best-available protection against disaster hazards, as identified by the expanded survey. State, University, and Regional support is available for emergency planning.

For shelter allocations made hereafter for metropolitan areas, the following policy factors will be applied insofar as possible — their general thrust being to maximize protection against direct effects as well as fallout:

- The resident population posture will be used (i.e., 1970 census population distribution, which in most communities is close to the late-night distribution). This assumes that most people in or near the city would be at home at the time of an attack warning. However, people who were in downtown areas at the time of attack would in most cases have considerable protection available, in larger downtown buildings.
- Use of below-ground space in homes and in public shelters will be emphasized as far as possible, in view of the better protection against direct effects afforded by most below-ground, as compared with above-ground, space. Regional and State representatives will advise local directors on the use of best-available space as identified by the expanded survey.
- Movement times will be kept short; e.g., using 30 minutes or less as movement time. (This includes 5 minutes each for leaving and entering buildings, thus leaving 20 minutes or less for actual movement.) Pedestrian movement is recommended, although vehicular movement could be appropriate in exceptional cases.

The combined effect of the above policies will be a CSP posture for metropolitan areas approximating the residential population posture. This should substantially reduce use of downtown public shelters, as compared to large city CSP's completed hitherto, in which a major aim was to fill as many public shelter spaces as possible. It is not prudent to make shelter allocations on the basis of maximizing use of downtown shelter space, in view of the new emphasis on the hazards that specific communities could face.

On both cost and policy grounds, DCPA will not fund the additional data collection and other work needed for a CSP using a day-time population distribution.

Community shelter plans for most non-metropolitan areas will continue to be based on use of best-available protection against fallout, including use of available home basements. CSP's for any non-metropolitan areas that may experience direct weapons effects should be based on factors similar to those outlined above for metropolitan areas — use of the resident population posture, emphasis on use of available below-ground space, and use of short movement times.

State CSP officers will continue to assist non-metropolitan jurisdictions in CSP work, as agreed between Regions and States (including any CSP updating so agreed upon).

In addition to assistance in developing shelter allocations as outlined above, DCPA will provide financial assistance for developing camera-ready CSP information materials, designed for printing and distribution during a period of international crisis. Details on the DCPA assistance will be provided after completion of pilot projects in each Region.

Impact of New CSP Policies on Shelter Stocking

DCPA recognizes that local Directors have invested substantial effort in past years in licensing and stocking downtown shelter facilities — a number of which may not be used in shelter allocations developed as outlined above. However, it is recommended that stocks be kept, in place insofar as possible. Should an attack occur with little warning, with many people still at work in downtown areas, supplies in downtown shelters would be available to survivors. ▲

SURVIVING DISASTERS

The Unforeseeable does Happen*

Civil Protection, an Army of Volunteers Standing on Guard for You

An army of volunteers is standing guard day and night over the lives of people in 663 Quebec municipalities, and it is hoped that this protection will soon be extended to the citizens of 1,000 municipalities in the province. These "soldiers", often unknown and misunderstood, are members of the Civil Protection organization.

Their task is not to fight other men but to protect people and save them from the unleashed elements of nature. They go into action whenever various disasters be fall us suddenly and often unexpectedly.

People often ask themselves what Civil Protection is, what its role is, what its resources are, how it operates, what its strength is and who composes it. We wish here, as a public service, to make our readers aware of the usefulness and effectiveness of this volunteer corps in peacetime as well as in wartime (which fortunately is not too frequent in this country).

It is interesting to note also that the Civil Protection organization calls upon persons of good will to help all people who are endangered in emergency situations. And who knows, you too may think of joining its ranks, in a pure gesture of good citizenship, and of preparing yourself for the day when you may be able to come to the help of your fellow citizens in difficulty.

Manuel Maître
Editor

Disasters are costly in terms of human lives and property. The Canadian and provincial governments have adopted measures for meeting these emergency situations. In Quebec, it is the Civil Protection organization that is responsible for assisting government authorities in planning for emergencies.

Civil Protection

In cooperation with the Canada Emergency Measures Organization (EMO), the Quebec Civil Protection organization recommends that preparations be made in all essential fields so that provincial and municipal government services can be maintained in emergencies and as many lives as possible saved.

Since April 1, 1970, the Civil Protection organization has been supervising and coordinating a new programme for Quebec spread over five years. This programme is based on the organization of emergency measures in municipalities with populations of more than 1,000. A target of 800 units has been set for 1975. At the present time, 663 municipalities have an emergency plan.

No Troops

Contrary to general belief, the Civil Protection organization does not have mobile or local troops to send the scene of a disaster. The equipment and personnel marked Civil Protection are in fact under the control of the respective municipalities, for example: the municipal emergency measures organizations of Breakeyville, Sainte-Marie-de-Beauce, Verdun, Arvida, etc.

The time when the Quebec Civil Protection organization does step in is before the disaster. Its contribution takes the form of a basic plan for the municipality, including annexes to set up an emergency measures organization and explain its operation. This planning is accompanied by the training of municipal officials and their assistants. These courses and exercises are included in the Civil Protection training programme. All persons attending courses and participating in exercises are municipal employees who do not necessarily hold permanent positions in the municipality. During a disaster, it is the "municipal emergency measures" organization that goes to work. However, if the municipality's human or material resources are exhausted because of the magnitude of the disaster, it is possible to call upon the Civil Protection organization. This body, having received an official request, can then assist in coordinating emergency measures. It can draw upon the resources of government agencies. If, in spite of these reinforcements, the operation is in danger of becoming paralyzed, the Civil Protection organization can turn to Canada EMO: this is what happened in the case of Saint-Jean-Vianney. These calls for help could, in certain cases, go beyond the country's borders.

Your Municipality's Emergency Plan

When the liaison officers of the Civil Protection organization offer to help in the preparation of an emergency plan, the mayor and councillors accept or reject the proposal. It they accept, they set up an "emergency-planning committee" composed of a municipal coordinator and thirteen directors of municipal emergency services. It is when a disaster occurs that these directors and the committee as a whole assess the situation and take whatever steps are necessary to direct their teams effectively. Municipal emergency services are established *before* the

*(Translation of "Survivre aux désastres — l'imprévisible arrive, *"La Patrie*, Week of September 23, 1973.)

disaster, with the help of the Civil Protection organization, and used *during* the disaster by the municipality, under its own authority.

Equipment

The equipment included in the municipality's emergency plan is loaned by the Quebec Civil Protection organization to the municipality, which assumes responsibility for it. This equipment therefore becomes an integral part of the local resources available *during a disaster*. The equipment lent to municipalities includes principally radiation-protection equipment, telecommunications installations, heavy and light trucks, mechanized and other types of rescue and fire-fighting equipment, etc.

Municipal Emergency Measures Organizations at Work

The aim of courses and exercises (9,877 participants in the courses and 4,023 in the exercises in 1972) is to ensure the effectiveness of the plan. Other courses are given as well by the Canadian Emergency Measures College in Arnprior, Ontario. The ultimate test, which definitely reveals the effectiveness of a plan, is its application in an actual emergency.

On Saturday, June 25, 1972, around six p.m., a tornado struck the northern part of the town of Maniwaki. The disaster caused two deaths and injured eleven people. Rescue operations were carried out. The next day it was possible to determine that a total of 63 homes had been damaged, of which six were totally destroyed, and that certain business establishments had suffered heavy damages.

The Department of Roads and Hydro-Québec emergency teams soon had the lines back in repair. After a meeting of the town council, municipal coordinator and Quebec Civil Protection representative, a programme was drawn up so as to finalize emergency housing and clothing arrangements. In addition, the municipalities concerned decided to set up an emergency fund for the victims. At the first meeting, plans for clean-up and rehousing operations were made.

At the same time, the emergency measures director of the Department of Social Affairs advised the municipality that he was despatching a team immediately to study the kind of assistance required in the health and social services. The Maniwaki municipal emergency measures organization was capable of putting into operation the services that were already organized and realized the need to proceed with the greatest haste possible with the work necessary to complete its emergency plan.

Floods — Municipalities of Fort-Coulonge and Mansfield & Pontefract

In May 1972, the municipalities of Fort-Coulonge and Mansfield & Pontefract (Pontiac County) were struggling against a serious flood caused by water overflowing the banks of the Coulonge River. As early as May 13, the municipality of Fort-Coulonge had no road connection with the outside. In Mansfield & Pontefract district, about 15 houses had been flooded and the residents evacuated.

The municipalities of Fort-Coulonge and Mansfield & Pontefract then put their emergency plan into effect and set up their headquarters in the Fort-Coulonge arena. In the days that followed, a temporary road was built in the southern part of the village of Fort-Coulonge to provide a means of access. It was also important to protect the Fort-Coulonge water and sewage systems, which were in danger of being seriously affected. It was only on May 21 that the authorities finished their emergency operations and that the municipalities were able at last to return to a normal life.

A number of provincial departments and services provided the assistance of their advisers during the flood and Civil Protection officials coordinated all the operations. The municipalities were able to organize the emergency services that were essential to the operations, and more than 125 persons, working in various services, contributed their assistance. It should be noted that the population remained calm thanks to an information service that kept it informed of developments. The coordination of the operations was made easier because of the fact that the two municipalities had a joint emergency plan.

Natural Disasters in Québec

Although Quebec is not among the regions of the world that are most affected by disasters of every kind, disasters are not completely unknown.

In the early days of New France, several serious earthquakes shook the Saguenay mouth region. The last one took place in 1925. However, since 1971, other tremors, although less serious, have been felt here and there on the eastern shore of Quebec, leaving no room for doubt about the possibility of a more serious earthquake.

Landslides and Floods

Quebec has also experienced a few important landslides. Besides those at Nicolet on November 12, 1953 (3 dead) and Saint-Joachim-de-Tourelle on May 10 and December 11, 1963 (9 dead), some may recall those at Notre-Dame-de-la-Salette on April 26, 1908 (33 dead) and Saint-Jean-Vianney on May 14, 1971 (31 dead). In 1971, 33 landslides were reported, causing $11,734,000 worth of damage.

In addition, we cannot overlook our own "Egyptian plague": floods. We know that 75% of the damage caused by flooding is due to spring overflow. However, in the autumn of 1966, three persons lost lives at Pointe-aux-Anglais as a result of the flooding of the river banks from Baie-Saint-Paul to Baie-Comeau.

Floods recur every year and each time they cause damage of between two and three million dollars. Considering this situation, a flood and landslide emergency committee was set up in 1970; it is coordinated by the Civil Protection organization.

Accidents and disasters are not always foreseeable. Although a hurricane, a sudden rise in water level, or even an earthquake can be expected, it is impossible to predict a disaster like the one that struck Ville-LaSalle on March 1, 1965, when an explosion destroyed a multiple-dwelling building (28 dead, 27 injured, 375 homeless).

Still closer to home was the derailment of a train carrying gasoline, oil and chlorine on April 11, 1973, at Papineauville, which led to the evacuation of 50 people. A house, a shed, a trailer and a car were burned. And this is not to mention in detail the collapse of an arena under construction at Saint-Ephrem-de-Beauce on April 17, 1973 (two dead, 19 injured) and the disaster that occured at Saint-Casimir in Portneuf County on August 10, 1973.

Radiation Protection and Telecommunications

The preparation of municipal emergency plans is motivated by the increased danger from a disaster in an area where the population is expanding. This concern also arises from the possibility of a nuclear war disaster. In this connection, an annex dealing with radiation protection is included in the plan. Slightly more than 460 municipalities have a radiation-protection annex and 216 of these have the necessary equipment (radiation meters, dosimeters, etc) on hand.

On the other hand, coping with a disaster would be completely inconceivable without maintaining constant communications between the teams and the services. It is the responsibility of the Civil Protection Telecommunications Service to supply and service the telecommunications equipment. This task is carried on at the Civil Protection subregional and regional levels for the maintenance of the three existing networks (subregional, regional and provincial).

Preparing before a Disaster

To prepare a municipality *before* a disaster strikes means to take account of the human and material resources already on hand. But it is also necessary to count on the reaction of individuals since each citizen must plan measures for his family to take in the event of a disaster. It is also important for each citizen to know that he can count on quick action by the authorities of his municipality, who have an emergency plan. For this purpose, the Civil Protection organization provides documents and brochures that can be obtained free of charge by writing to: Quebec Civil Protection, P.O. Box 10,000, Postal Terminal, Quebec, P.Q., G1L 7R9. ▲

EDITORIAL OPINION

Jim Morrison
in the
The Daily Gleaner
Fredericton, N.B.

———

There being no wars on our horizon, who needs an Emergency Measures Organization? We do, that's who.

This was proven beyond doubt when the majestic St. John River went on a rampage in late April and flooded Fredericton and area.

It is terrifying to think of the chaos that might have been if we didn't have an EMO.

The ironic part of it is that many New Brunswickers were unaware that we did have such an emergency organization. Citizens and governments are always prone to neglect and forget when times are good, wars and disasters unknown.

Still, it is reassuring to known there is a dedicated group of men and women whose job it is to prepare for any emergency. It is also reassuring to realize that the government is aware enough to give funding for such a group. The budget is small — too small, many say — but it was sufficient to build a group that was able to cope with one of the worst disasters we've had in many years.

Because of EMO — and the large number of volunteers who responded to the call — a total of 1,458 people were evacuated from their dwellings during this year's flood in this area. Of these, 407 were accommodated at UNB, 104 at CFB Gagetown and 947 found shelter with relatives or friends.

Not one life was lost.

And EMO and its volunteers were aware of the danger to animals, as well as that to humans. More than 1,200 cattle were rescued, 400 hogs and 20 horses. There was a fatality list here: four cattle, one horse and one pig.

The amazing part is that the list was kept to such a low number.

Even after the flood had subsided, however, many were still wondering what EMO is and where it came from. We forget too quickly, perhaps.

The New Brunswick Emergency Measures Organization is a branch of the department of municipal affairs, funded by the federal (75 per cent) and provincial (25) governments. Its role is to plan for emergencies of any kind, to assist and organize other departments and agencies (provincial and municipal) in developing plans so any emergency can be coped with.

There are 11 districts in the province, municipal services regions, where EMO advises municipalities in planning. Each district has a co-ordinator.

But EMO wasn't set up for the sole purpose of evacuating people during a disaster. Its role is much deeper. For example, under welfare it must think of lodging, feeding, registration, personnel and inquiring. Under health it is concerned with casualties, public health, assisting hospital in preparation of disaster plans, providing 11 casualty collecting units around the province and even in emergency hospitals.

It is a fact that New Brunswick's EMO does have a 200 bed emergency hospital. There has been some misunderstanding about this. Some have asked why the emergency hospital isn't put to full time use in some part of the province, that there's a real need for more hospital beds.

But the EMO emergency hospital is

not really a 200-bed hospital enclosed in a permanent building. It is a kit, a huge one consisting of 900 boxes weighing 40,000 pounds. Included are water purifying supplies, electric generator, X-ray equipment, operating rooms, non-perishable drugs and other supplies.

It's a MASH type of operation, really, one designed for a real emergency, not for everyday use.

But hospitals, regardless of type, are of little use if there are no doctors, nurses, administrators, and other personnel. That's why EMO has recruited doctors and nurses for its emergency force, ready to go anywhere in the province anytime EMO asks. Thus far EMO has 83 doctors and nurses ready to roll.

Most emergencies also call for a supply of food and pure water. Once again EMO has anticipated the need and has prepared for it. The organization has feeding kits ready for any disaster. These are not, repeat not, C Rations or the like. They are kits made up of stoves, tables, pots and pans, knives, etc. Each kit can handle feeding for about 500 people.

Food is not stockpiled. Usually there is food available in any disaster area. But EMO takes no chances. Resources are catalogued, including vehicles, food, clothing, lodging space and other items. A plan is being developed for all of N. B.

So what is EMO? It's not a large group. Henry Irwin is the director and Jock Murray, his assistant. John Langton is the planning officer, and Douglas Neilson the training officer. E. H. (Ted) Bringloe is emergency health planning officer, and William Sargeson is emergency welfare planning officer.

On the shoulders of these men rests the responsibility for bringing order out of chaos from any emergency or disaster. The fact that they can attract hundreds of volunteers in a matter of hours is proof of their ability to organize. The April flood gave all the proof needed.

DEPARTMENT OF NATIONAL DEFENCE
CANADA EMERGENCY MEASURES ORGANIZATION

CANADA

MINISTÈRE DE LA DÉFENSE NATIONALE
ORGANISATION DES MESURES D'URGENCE DU CANADA

Ottawa, Ont.
January 1974.

May I take this opportunity to extend to EMO National Digest readers and contributors, federal, provincial, municipal and international civil emergency planners and personnel of Canada Emergency Measures Organization my best wishes for happiness and success in the New Year.

C.R. Patterson,
National Coordinator,
Civil Emergency Measures.

EMO X

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